

President holds first town hall for students

Jamie Hanlon

Within the province, there's a lot of pride in the University of Alberta and its graduates.

That's one of the messages University of Alberta President Indira Samarasekera shared with attendees at the inaugural town hall for students held in the Centennial Centre for Interdisciplinary Science.

Speaking to the group Oct. 13, Samarasekera said that in talking with communities and groups across the province, the recurring message is pride in the institution, the work and research done, and the quality of the graduates it produces. Samarasekera said she also does a fair bit of listening, and no voice is more important than that of the students.

"We receive feedback from students regularly, and I want you to know that we are listening and we are making changes," she said. "We certainly value our students and we have worked hard with the student community to ensure you are getting better access to supports to help you both personally and academically."

Samarasekera outlined the roles of the Student Success Centre and Physical Activity and Wellness Centre, whose functions assist students with issues related to academic support and mental and physical health. She also announced an initiative through the Office of the Dean of Students, called "Take Back the Term," which is a conference to give students who may be facing personal or academic-related issues the chance to "recapture some of the enthusiasm they had when they first arrived on campus and re-energize their sense of being part of the community."

Samarasekera also spoke of new initiatives designed to enhance the university experience. She spoke of new programs such as the Green and Gold Student Leadership and Professional Development Grant and the newly launched Undergraduate Research Initiative.

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In case of fire



Michael Brown

Staff and students were given lessons on proper use of a fire extinguisher in Quad during the University of Alberta's Fire Safety Week Oct. 11–14.

U of A academics hit Canada Research Chair high

Michael Brown

The University of Alberta has been awarded seven new Canada Research Chairs to go along with nine renewals and two advancements worth a total of \$17.1 million, the second-highest number of CRCs in the country, the federal government announced Oct. 12.

"These CRC new appointments, renewals and advancements are a further confirmation of the quality of the faculty members at the University of Alberta," said Lorne Babiuk, vice-president (research). "We are delighted with these recent announcements and the support they represent."

Three of the new CRCs were named as Tier 1 awards, worth \$1.4 million paid out over seven years and are given to researchers acknowledged by their peers as world leaders in their fields. The list consists of Tom Hobman, CRC in

RNA Viruses and Host Interactions; Evangelos Michelakis, CRC in Applied Molecular and Mitochondrial Medicine; and Yunjie Xu, CRC in Chirality and Chirality Recognition.

Hobman, a professor in the Department of Cell Biology whose research is geared toward understanding virus-host interactions so that novel antiviral therapies can be developed, says viral infections pose a major health and economic burden on our society, and as such, research like his and that of a group of researchers at the U of A's Li Ka Shing Institute of Virology is essential.

"Over the last two years, the University of Alberta has been extraordinarily successful in attracting funding from the federal, provincial, private and biopharmaceutical sectors to support virus research," said Hobman. "I am very grateful for the support from the CRC program and look forward to pursuing our studies in this fantastic research environment."

Michelakis, a cardiologist in the Department of Medicine, researches how metabolism and mitochondria—the organelles within the cells that produce energy—are involved, causing cancer and pulmonary hypertension.

Xu, a professor in the Department of Chemistry who characterizes molecules that are not identical to their mirror images using highly specialized instruments and theoretical modeling, says her work would not be possible without the support of the U of A.

"I am most grateful for the outstanding services provided by the chemistry machine shop and for the strong sup-

port of my colleagues and collaborators in the department," she said.

The remaining four new CRCs were named as Tier 2 CRC researchers, a title that comes with a \$500,000 award to be paid out over five years and is given to emerging researchers, acknowledged by their peers as having the potential to lead in their field. The list consists of Sean Bagshaw, CRC in Critical Care Nephrology; Ken Butcher, CRC in Cerebrovascular Disease; Joel Dacks, CRC in Evolutionary Cell Biology; and Sarah Hughes, CRC in Cell Adhesion and Proliferation.

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Let there be life

Brian Murphy



The Earth's first life forms may have taken hold in an environment similar to this.

New University of Alberta research shows that the first oxygen-breathing bacteria occupied and thrived on land 2.48 billion years ago, 100 million years earlier than previously thought.

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Three visionaries to be honoured at fall convocation

Folio Staff

Three outstanding Canadians will receive honorary degrees from the University of Alberta this November.

"We are delighted to recognize the inspiring commitment of each of these individuals to ground-breaking research and positive social change. Our university's commitment to 'uplifting the whole people' seeks both to develop the whole person and to engage the many communities we serve," said U of A Chancellor Linda Hughes.

The three recipients of the university's highest honour will deliver addresses during convocation ceremonies at the Jubilee Auditorium Nov. 16 and 17.

Chair of the Mental Health Commission of Canada, Michael Kirby has had a distinguished career as a public servant. As deputy clerk of the Privy Council from 1980 to 1983, he was deeply involved in the negotiations that led to the patriation of the Canadian Constitution and the adoption of the

Charter of Rights. As chair of the Standing Committee on Social Affairs, Science and Technology while serving on the Canadian Senate, he co-wrote the first-ever national report on mental health, mental illness and addiction. Kirby was also named an officer of the Order of Canada. He will receive an honorary doctor of laws degree Nov. 16.

A celebrated athlete and a dedicated social innovator, Rick Hansen is best known in Canada and around the world as the Man In Motion. Winner of 19 international wheelchair marathons, six Paralympic medals and nine gold medals at the 1982 Pan American Wheelchair Games, he then set out to make a difference in the lives of others. For two years, two months and two days, Hansen wheeled more than 40,000 kilometres through 34 countries, raising \$26 million which was further leveraged to \$246 million and granted to spinal-cord injury research and accessibility initiatives. Twenty-five years later, he continues his quest for a healthy and inclusive world through the Rick Hansen Foundation. Hansen is a Companion of the Order of



(Left to right) Rick Hansen, Michael Kirby and Lawrence Chia-Huang Wang will receive honorary degrees during convocation ceremonies Nov. 16 and 17.

Canada. Hansen will receive an honorary doctor of laws degree Nov. 17.

An educator and innovator, Lawrence Chia-Huang Wang has led the creation of international partnerships, sustainable development practices and economically vibrant rural communities. Following his research on metabolism and cold tolerance in humans, he invented the Canadian Cold Buster bar and the Access bar, a patented "functional food" currently marketed in 12 countries. In 2000, he co-founded the U of A's ECO—Ecological Conservancy Outreach—Fund to

help with rehabilitation and eco-management of the Upper Yangtze River in China. Wang is an elected fellow of the Royal Society of Canada and a recipient of the Friendship Award, the highest honour the government of China bestows upon foreign experts. He will receive an honorary doctor of science degree Nov. 17. ■

Town hall

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Samarasekera noted that student input was directly involved in the revamping of the university's website. These changes, she said, make it easier for students and prospective students to navigate their way around the university's online environment, and are only the beginning of further plans for the university's Internet presence.

"Our vision is to have a web environment that leads all Canadian post-secondary institutions," she said.

Of the newly opened Centennial Centre for Interdisciplinary Science, Samarasekera spoke of the promise and potential that the building holds in "the ground breaking ways that we are going to deliver science education." She said the building has helped recruit both students and researchers alike who came to the U of A because "they could sense the potential" that the building offers.

“Our vision is to have a web environment that leads all Canadian post-secondary institutions.”

Indira Samarasekera

Samarasekera also covered queries on everything from the tuition differential for international students to the disparity in tuition between the university and Quebec-based institutions and the creation of greater opportunities for deserving international undergraduate students. She thanked the contributors for their thoughtful questions and sought to provide answers that met students' expectations.

Samarasekera sought to assuage any concerns of students by describing the U of A's proactive approach to meeting a balanced budget during economic uncertainty while maintaining the level of quality students expect. She responded to other questions regarding how a university degree prepares students for success in a given field, even in the face of uncertain economic future.

"By virtue of getting a university degree, you have already recession-proofed yourself," she said, stating that recent statistics noted more than 300,000 jobs created for people with university degrees eclipsed the loss of 200,000 jobs for people without degrees. "That's not to say that it's going to be easy to find a job, but you have to know that the investment you made is already going to be standing you in good stead." ■

Find has science 'adaptin' to a new biology

Quinn Phillips

University of Alberta researcher Joel Dacks and two of his summer

undergraduate students, Lael Barlow and Gabriel Casey Francisco, have made a discovery that will mean textbooks need to be rewritten and cell biology researchers worldwide may have to revisit their old experiments.

Inside every cell that isn't bacterial is a "membrane trafficking system." It has long been known to have four protein complexes, called adaptins, which are all involved in moving things in, out and around the cell. Joel Dacks, in the Department of Cell biology in the U of A's Faculty of Medicine & Dentistry, along with University of Cambridge colleagues Jennifer Hirst and Margaret Robinson, has discovered there is a fifth adaptin. According to their research, it has been around for billions of years, but no one has been able to spot it.

"What this does for cell biol-

ogy is open up a whole new avenue of research," said Dacks. "We thought there were four big players in the processes of how things got moved around in the back half of the cell. There's a fifth player on the field; we just couldn't see it."

Understanding how trafficking works in cells is vital, because when something goes wrong in this system, oftentimes the result is disease. Mutations in genes involved in trafficking are implicated in a number of neurodegenerative disorders including Alzheimer's, Huntington's disease and Amyotrophic lateral sclerosis, also known as Lou Gehrig's disease.

"We already have one disease where we know where this complex is involved," said Dacks. It is called hereditary spastic paraplegia, which causes increasing leg spasms and eventually loss of mobility.

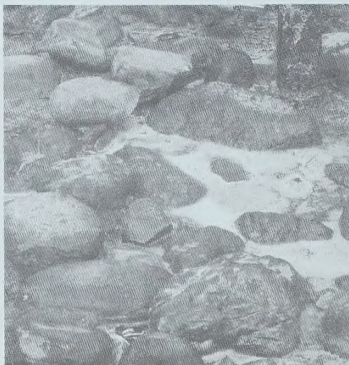
"More importantly, the drive behind the study is that to understand the diseased cell, we have to know what a healthy one really looks like. You need



Joel Dacks

Researchers finds life on Earth is older than first thought

Continued from page 1



Acidic waste water from mining sites can support the same oxygen using bacterial life that appeared on Earth 2.48 billion years ago.

The research team, led by U of A geomicrobiologist Kurt Konhauser, made their find by investigating a link between atmospheric oxygen levels and rising concentrations of chromium in the rock of ancient seabeds.

"We suggest that the jump in chromium levels was triggered by the oxidation of the mineral pyrite (fool's gold) on land," said Konhauser.

Pyrite oxidation is a simple chemical process driven by two things: bacteria and oxygen. The researchers say this proves that oxygen levels in Earth's atmosphere increased dramatically during that time.

"Acrobic bacteria broke down the pyrite, which released acid that dissolved rocks and soils into a cocktail of metals, including chromium," says Konhauser. "The minerals were then carried to the oceans by the run-off of rain water.

"Our examination of the ancient seabed data shows the chromium levels increased significantly 2.48 billion years ago," said Konhauser. "This gives us a new date for the Great Oxidation Event, the time when the atmosphere first had oxygen."

The rising levels of atmospheric oxygen fostered the development of new bacteria species, and Konhauser says that, following the evolutionary path back to that first oxygen-breathing life form on land, our ancestors started off in a pool of highly acidic water.

The researchers say the modern analogue for that first primitive oxygen-dependent life form on

Earth is still with us.

"The same bacterial life forms are alive and well today, living off pyrite and settling in the highly acidic waste waters of mining sites the world over," said Konhauser. ■